

[NAME OF DOCUMENT] CLAIMS

[Claim 1]

An optical recording disc constituted so that data can be recorded therein and reproduced therefrom by converging a laser beam having a wavelength  $\lambda$  of 390 nm to 420 nm thereonto using an objective lens having a numerical aperture of 0.7 to 0.9, the optical recording disc comprising a substrate, a third dielectric layer formed on the substrate and having a thickness of 10 nm to 140 nm, a light absorbing layer formed on the third dielectric layer and having a thickness of 5 nm to 100 nm, a second dielectric layer formed on the light absorbing layer and having a thickness of 20 nm to 100 nm, a decomposition reaction layer formed on the second dielectric layer, having a thickness of 2 nm to 50 nm and containing noble metal oxide as a primary component, a first dielectric layer formed on the decomposition reaction layer, and a light transmission layer formed on the first dielectric layer and having a thickness of 10  $\mu\text{m}$  to 200  $\mu\text{m}$  and being constituted so that when it is irradiated with the laser beam from the side of the light transmission layer, the noble metal oxide contained in the decomposition reaction layer as a primary component is decomposed into a noble metal and oxygen so that a bubble pit is formed in the decomposition reaction layer by thus generated oxygen gas and fine particles of the noble metal precipitate into the bubble pit, thereby forming a recording mark in the decomposition reaction layer.

[Claim 2]

An optical recording disc in accordance with Claim 1, wherein the second dielectric layer has a thickness of 40 nm and 100 nm.

5 [Claim 3]

An optical recording disc in accordance with Claim 2, wherein the second dielectric layer has a thickness of 50 nm and 100 nm.

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[Claim 4]

An optical recording disc in accordance with Claim 1, wherein the second dielectric layer contains a mixture of ZnS and SiO<sub>2</sub> as a primary component.

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[Claim 5]

An optical recording disc in accordance with Claim 2, wherein the second dielectric layer contains a mixture of ZnS and SiO<sub>2</sub> as a primary component.

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[Claim 6]

An optical recording disc in accordance with Claim 3, wherein the second dielectric layer contains a mixture of ZnS and SiO<sub>2</sub> as a primary component.

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[Claim 7]

An optical recording disc in accordance with Claim 1, wherein the noble metal oxide is platinum oxide and the platinum oxide is decomposed into platinum and oxygen when the decomposition reaction layer is irradiated with the laser beam via the light transmission layer.

[Claim 8]

An optical recording disc in accordance with Claim 1, wherein the

light absorbing layer contains at least one of Sb and Te.

[Claim 9]

An optical recording disc in accordance with Claim 1, wherein the  
5 second dielectric layer and the light absorbing layer are deformed when  
the bubble pit is formed in the decomposition reaction layer.